



Washington State
Conservation
Commission

Dairy Technical Advisory Committee

Final report and recommendations:
Minimum elements of dairy nutrient
management plans in Washington State

December 2, 1998

Recommendations

Minimum elements of dairy nutrient management plans

Minimum elements

The TAC recommends the elements listed below be adopted as required minimums for all dairy nutrient management plans developed in Washington State.

- All plans must be approved using the “Checklist for Conservation District Approval of a Dairy Nutrient Management Plan” as attached to this report. The approval checklist forms the minimum elements test all plans must pass to be approved by a conservation district. The checklist not only assists district boards in approving plans, but also helps planners and producers in developing workable, meaningful plans.
- All plans developed after November 1, 1998 must follow the same general format or arrangement of topics as shown below. Plans developed before this date may be approved if they pass all of the checklist tests. Older plans requiring revision or updating should be reformatted to fit the format below.

Certification form

Approval checklist

Section 1: Introduction

- Purpose of the plan
- Summary of operations
 - Maximum herd size allowed in the plan
 - Summary of the land base to be used for application of manure and wastewater (acres, locations and methods of application)
 - Application summary
 - Storage management summary

Section 2: Production

- Manure and waste water
- Nutrients

Section 3: Collection and treatment

- Potential sources of contamination
- Planned treatment

Section 4: Storage and transfer

Section 5: Nutrient use

- Application area description
- Crop nutrient requirements
- Testing requirements
- Application site management

Section 6: Specifications

- Management
- Vegetative
- Structures

Section 7: Operation and maintenance of structures and practices

- Nutrient management
- Irrigation water management
- Nutrient testing

Section 8: Appendices

- Manure application agreements
- NRCS planning tools
- Potassium concerns
- Recordkeeping
- Maps
- Field records

- Each plan must contain a summary of the key factors in the dairy operation that were significant in the development of the plan, including, but not limited to: herd size; existing facilities; land base; and crops.
- Each plan should clearly specify the parameters of the operation that cannot be exceeded without invalidating the plan.
- Plans should be developed using the planning methods, standards, specifications, and practices contained in the Field Office Technical Guide and Agricultural Waste Management Field Handbook, both USDA Natural Resources Conservation Service publications.
- Storage requirements for each dairy operation should be determined individually. A minimum storage period applicable to all dairies is specifically not recommended by the TAC. Agronomic principles applied on a site-specific basis form the foundation of meaningful, effective plans.
- Specific record keeping and testing requirements should be included in all dairy nutrient management plans.

Other recommendations

- The use of SWAPA (soil, water, air, plants and animals) as a planning paradigm should be a choice made by the dairy operator. In addition, SWAPA without the wildlife component should be a choice. Documentation of the choice need not be made in the plan but should be included in the cooperator file field notes.
- Risk of pollution should be reduced by designing excess capacity into storage facilities.
- When new structures are to be tied, or connected, to older structures, the NRCS should provide guidance to dairy planners on a case-by-case basis, evaluating existing structures for groundwater risk, safety, health, and function. The group also agreed this is an issue the TAT's should help coordinate within their regions. The NRCS National Engineering Manual contains policies to assist in evaluating existing structures. Where older structures are found to be safe and functional, they can be used in the dairy nutrient management system. Structures that are unsound, unsafe, or not fully functioning will need to be repaired or replaced.
- All dairy plans in conservation district cooperator files should be reviewed for conformance with the approval checklist. Districts are encouraged to initiate an in-house review of these

files, but the responsibility for having a plan that meets the requirements of the Act lies with the dairy producers. Districts should assist their cooperators in meeting the requirements of the Act.

- The Act calls for the formation of four Regional Technical Assistance Teams (RTATs). The TAC recommends two RTATs be formed to serve west of the Cascade Mountains, and two RTATs be formed to serve east of the Cascades. Westside RTATs should meet jointly whenever possible, and the same goes for eastside RTATs. The Washington Department of Ecology should be invited to participate in the RTATs. Coordination of the RTATs could be provided by Field Operations Managers (Conservation Commission), by WSU/Cooperative Extension Service staff, or by a coordinating team with representatives of the USDA Natural Resources Conservation Service, Washington Conservation Commission, Washington Department of Ecology, and Washington State University/Cooperative Extension Service. Tasks for the RTATs could include: reviewing requests to use new technologies; reviewing dairy plans; customizing plan elements and formats to fit regional conditions; coordinating dairy planning needs on a regional basis; and reviewing new Best Management Practices.
- A quality assurance process is recommended. It should focus on the actual planning process and not on the effectiveness of implemented BMPs. A quality assurance process is a desirable way to check the consistency and quality of dairy nutrient management plans. The process should center around peer review of plans. Site visits to the dairies should be part of the process.
- Outreach and training are needed. The approval and certification process is new to dairy operators. The plan format is new. Mandatory inspections are new. If our ultimate goal is to protect water quality, we need to reach out to all participants. The outreach audience includes dairy owners and operators, conservation district staff and supervisors, NRCS staff, Ecology staff, outside consultants and engineering firms, and other interested parties. Outreach mechanisms should include mailings to dairies and conservation districts, expansion of the Dairy TAC Shack web site (<http://www.conserver.org/dairy/>) , and public meetings and workshops. The TAC recommends charging the two RTATs with developing training outlines. Immediate training for districts is required on using the approval checklist consistently from district to district.

Miscellaneous discussion

Clean water is the real product of good plans and practices

The TAC believes the primary goal of dairy nutrient management is clean water. The statement recommended by the TAC for inclusion in each plan is:

"The fundamental purposes of dairy nutrient management plans are to: prevent contaminated waste water discharge to streams, drainage ditches, or other surface waters from the dairy; prevent migration of contaminants from the dairy facility to the underlying aquifer; agronomically recycle the dairy nutrients produced through soil and crops to the fullest extent; and meet the requirements of The Dairy Nutrient Management Act of 1998, The Clean Water Act, and comply with Federal, State and local laws regarding water quality standards."

Recommendations founded on technical, not political, merits

The TAC concluded very early in their work that their recommendations should be based solely on the technical issues involved in effective management of dairy nutrients. The TAC felt

the Dairy Advisory and Oversight Committee would help provide balance to the TAC's purely technical recommendations.

On-going certification process

Several members of the group expressed a concern that dairy operators would not have sufficient time to learn and fine-tune the operation of the new dairy nutrient management plan before being held to a black-and-white standard during Ecology inspections. Some members suggested that certification be delayed until one or two years after the plan has been fully implemented. Others suggested that producers go through at least one seasonal cycle.

The TAC also discussed on-going certification process. Several members expressed a strong desire to help dairy operators learn to effectively use their individual dairy nutrient management plan. While the Act doesn't require annual certification, a process of annual (or more frequent) follow up visits could form the basis of an on-going certification renewal process.

Specifically, three areas of concern would be annually reviewed: record keeping; application of dairy waste; and the operation and maintenance of structural practices. Conservation districts should conduct (at a minimum) yearly follow up visits to evaluate demonstrated management according to the plan.

The results of these visits would go into the cooperator's case file in the local Ag Service Center office.

Background

Who - What – When - Where - How

Who

Who formed the Technical Advisory Committee?

The Dairy Technical Advisory Committee was formed in April, 1998 by the Washington Conservation Commission as required by the passage of the Dairy Nutrient Management Act (Senate Bill 6161) now encoded in Chapter 90.64 of the Revised Code of Washington.

Who sits on the TAC?

A cross-section of the technicians and scientists in the Washington Conservation Partnership and experienced in dairy nutrient management participate in the TAC. The original TAC members included:

- Laurie Crowe (South Yakima Conservation District)
- Frank Easter (USDA Natural Resources Conservation Service)
- John Gillies (USDA Natural Resources Conservation Service)
- Phil KauzLoric (Washington Department of Ecology)
- Joe Lange (USDA Natural Resources Conservation Service)
- Wym Matthews (Thurston Conservation District)
- Dave Ragsdale (US Environmental Protection Agency)
- Chuck Timblin (Whatcom Conservation District)
- David Grusenmeyer (WSU/Cooperative Extension Service)
- Tom Salzer (Washington Conservation Commission) facilitated each meeting, and Angela Van Cleave (Washington Conservation Commission) provided organizational assistance.

A few changes in the TAC occurred during the summer and fall of 1998. Max Linden (Washington Department of Ecology) joined the TAC at the TAC's request. David Grusenmeyer resigned from WSU/CES, and Roger Cady (WSU/CES) took his place.

What was the TAC charged to do?

The charge given to the TAC was to develop recommendations on the minimum elements contained in every dairy nutrient management plan in Washington State. Under the Act, each dairy with a Class A milk license must obtain a dairy nutrient management plan.

The TAC was to report their progress and recommendations to the Dairy Advisory and Oversight Committee and to the Washington Conservation Commission. Under the Act, the Commission is tasked with adopting the required minimum elements for dairy nutrient management plans.

The process as understood by the TAC was: the TAC makes recommendations; the Dairy Advisory and Oversight Committee reviews the recommendations and makes suggestions; and the Washington Conservation Commission acts on the recommendations and suggestions.

When was the TAC to be done with the minimum elements?

The TAC was tasked to complete the development of minimum elements by November 1, 1998 as required by the Act.

Where were meetings held?

- May 4, 1998 in North Bend, Washington.
- May 12, 1998 by teleconference.
- June 4, 1998 in Ellensburg, Washington.
- October 9, 1998 by teleconference.
- October 27, 1998 by teleconference.

How

How was information transferred?

Agendas, notes, revisions and other items were e-mailed and faxed to TAC members.

A group e-mail address (dairytac@conserver.org) was established to facilitate group discussions via e-mail and to simplify transmission of information to the entire TAC.

A publicly accessible Web site was established where notes, drafts and final products were posted. A bulletin-board-style forum was included in the Web site to facilitate group revisions to draft documents. The Dairy TAC Shack is accessible at <http://www.conserver.org/dairy/index.html>.

How were decisions made?

The group agreed to use a consensus approach to decision making in meetings. When progress stalled, the TAC went through a three-step sequence of questions to help the group reach consensus or move on:

- 1) Are you happy with this?
- 2) If you're not happy, can you live with it?
- 3) If you can't live with it, what can we do to move on (e.g., table it, form a subcommittee, etc.)?